

Relevant OCONUS Products

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<http://weather.msfc.nasa.gov/sport>
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Short-term Prediction Research and Transition (SPoRT)



transitioning unique NASA data and research technologies to operations



SPoRT Mission and Paradigm

Mission: Apply unique NASA Earth science research and observations to improve the accuracy of short-term (0-24 hr) weather prediction at the regional and local scale – work mainly with WFOs

SPoRT Paradigm

- match observations/capabilities to forecast problems
- develop / assess solution in “testbed”, transition to decision support system
- conduct training, product assessment and impact

CONUS Forecast Problems

- timing and location of severe weather
- local variations of temperature / moisture
- detection and monitoring of fog, smoke, fires
- coastal weather processes, off-shore weather systems
- gap filler in data void regions

OCONUS Forecast Challenges

- marine weather – ocean conditions, winds, precipitation
- atmospheric conditions affecting aviation

Active collaborations with 15 WFOs using over 30 products to address these forecast problems – recent collaborations with Alaska WFOs



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SPoRT GOES-R CONUS Proving Ground

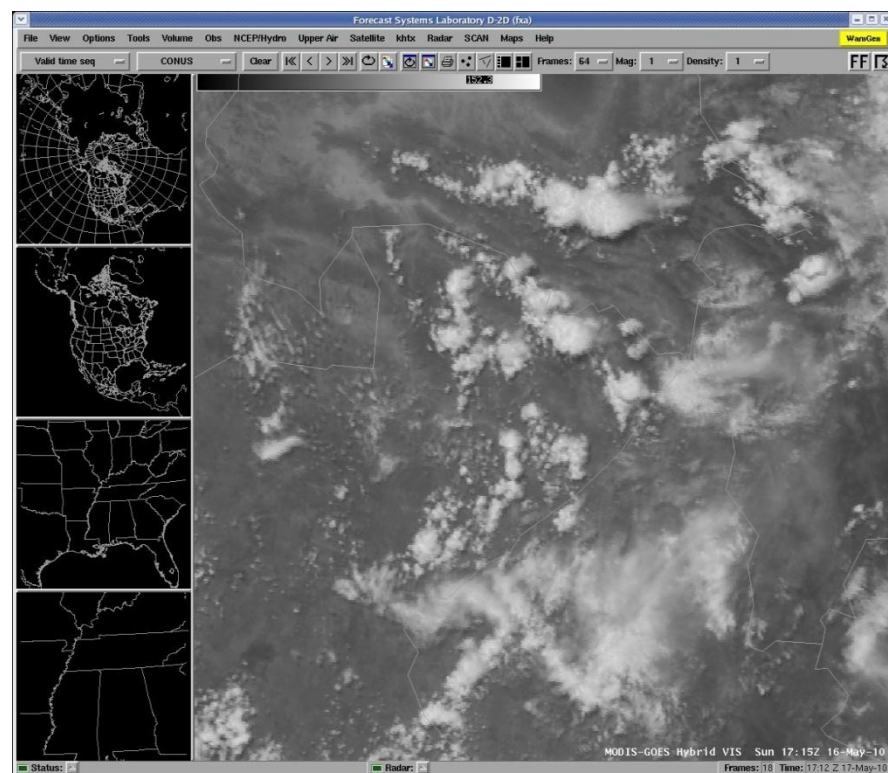
Help with transition of GOES-R products to operational community (e.g., NWS)

Use successful SPoRT paradigm to link product to problem, test and transition, train and assess impact

Focus on strengths – GLM, selected ABI products, RGBs, AWIPS II, product training and assessment

2009-2011

- Participate in GOES-R PG HWT Spring Experiment – forecasters/ expertise/data transition
- Developed a Pseudo-GLM flash extent density product – multi-network applications
- High resolution SST composite for diagnostic and local model initialization
- Developed / evaluated a near-real time GOES-MODIS hybrid product (as a proxy for ABI imagery) at 8 SR WFOs



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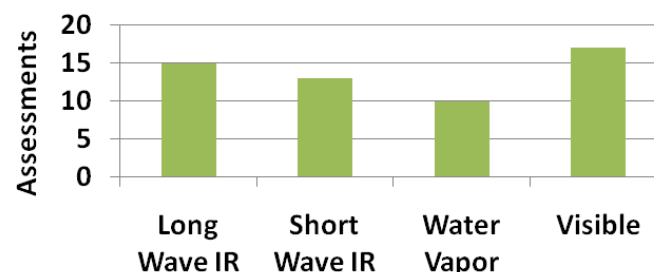
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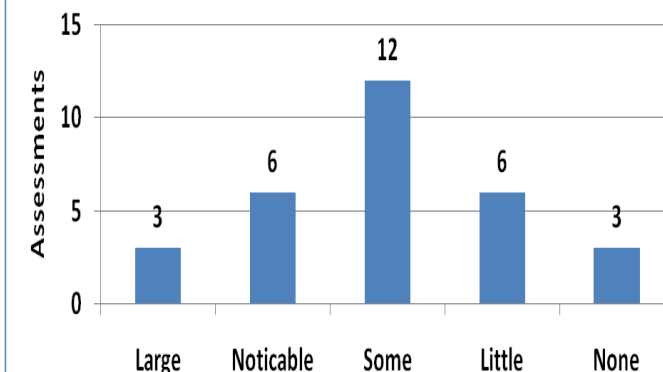
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Reviews per Hybrid Product



Impact Rating by Users



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Recently

- Collaboration with CIRA on product generation (GOES Sounder and SEVIRI RGB products) / dissemination to NHC for NAWIPS use
- Suite of RGB and SST products to other National Centers (beginning August 2011)



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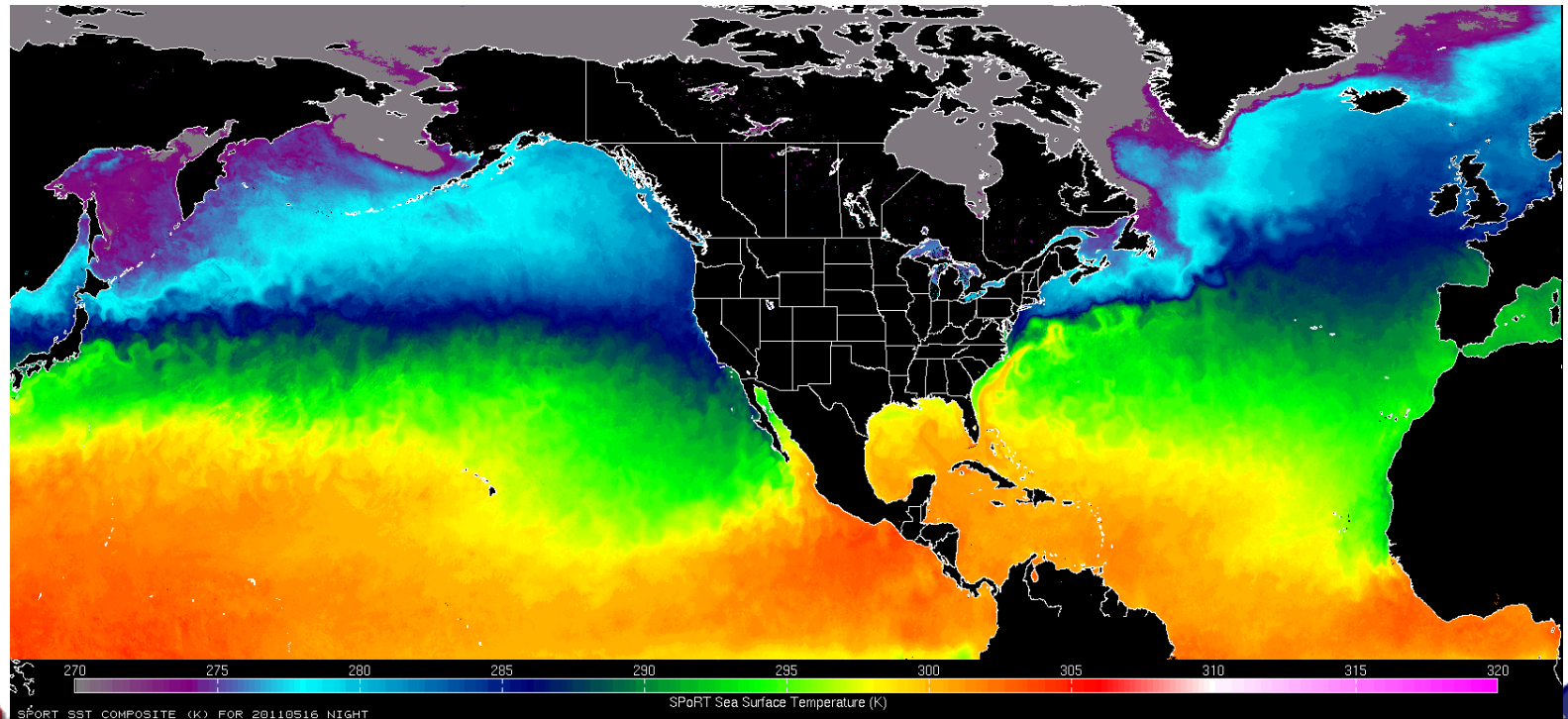


OCONUS Activities

Alaska Region

Provide high resolution SST product as a proxy for GOES-R ABI capabilities

- Diagnostic use in AWIPS at WFOs
- “Ice desk” – ArcGIS format
- Initialize regional models (GRiB)



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Collaborative modeling

- Improved resolution, domain coverage, and physics selections
- UAF collaborations with WRF/LIS

WindSat ocean surface wind vectors for marine weather applications

- access to enhanced wind vectors from NRL
- put in AWIPS data stream and distribute (WFOs)
- training and assessment



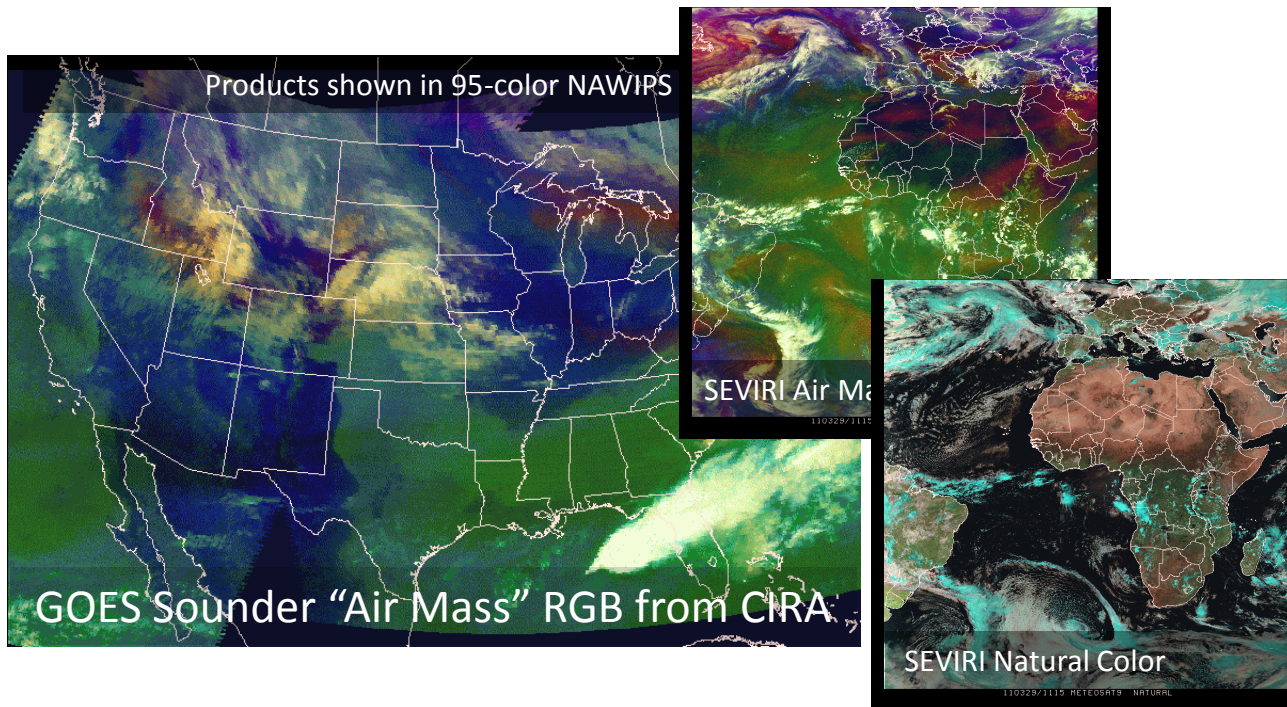
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OCONUS Activities

Collaborations with UAF / GINA to access real time (RT) Terra MODIS data and near real-time (NRT) Aqua MODIS to create ABI proxy products

- GOES-MODIS hybrid simulating ABI imagery
- generation of suite of RGB products similar to those for ABI



MODIS RGBs

- Air mass
- Day/night microphysics
- True / natural color
- Snow / fog
- Dust

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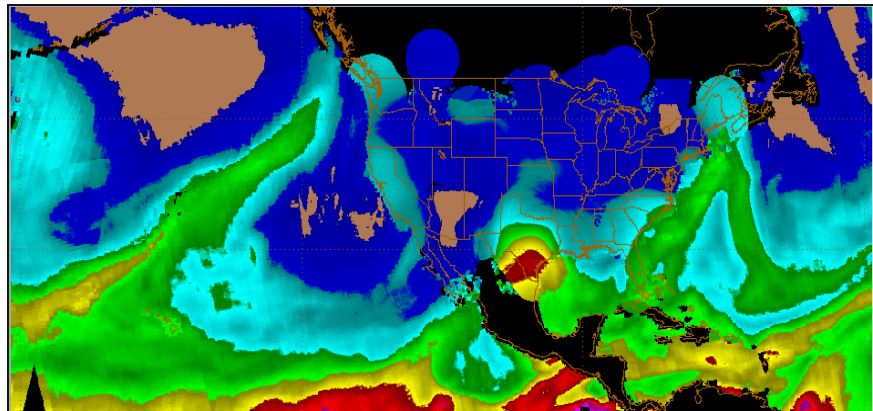
Passive microwave products from to address particular forecast challenges in region

Data and products in KML for EVCN

- collaborate with GINA/CIMSS to get suite of aviation products in KML

NPP/JPSS VIIRS

- data and products



Summary

SPoRT is actively involved in the GOES-R Proving Ground activity

- developing and disseminating data and products to end users
- providing user appropriate training
- conducting product impact and assessment activities

OCONUS activities include

- products and tools for Alaska and Pacific Region
- AWIPS/NAWIPS/AWIPS2/kml
- suite of PG products (SST, hybrid, RGB imagery, others)
- other “experimental” products (passive microwave, TPW, etc.)



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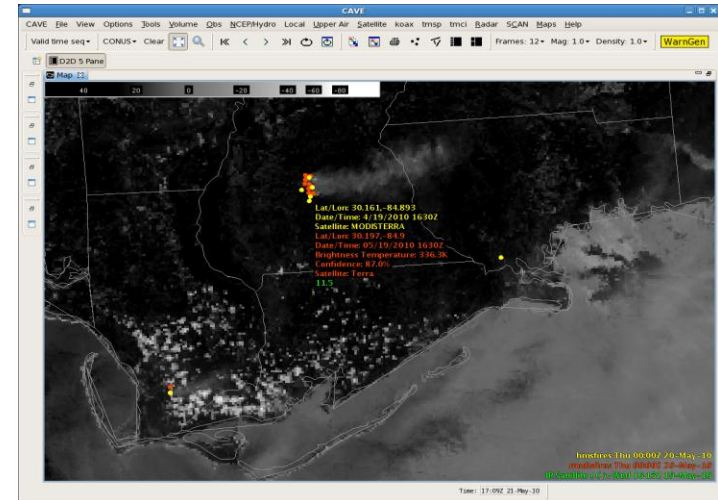


Product Examples in AWIPS II

Satellite image data

Use of SPoRT McIDAS area EDEX plug-in for satellite image data provides controllable flexibility in data type ingest

Additional CAVE plug-in for MCIDAS area data gives full control over display of data

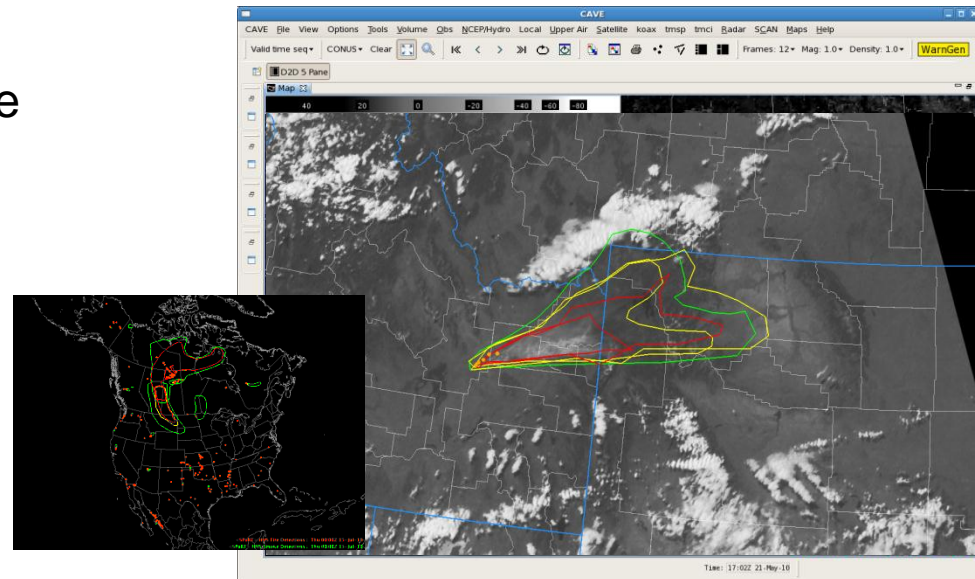


MODIS and derived hot spot data in AWIPS II

Point data and shape files

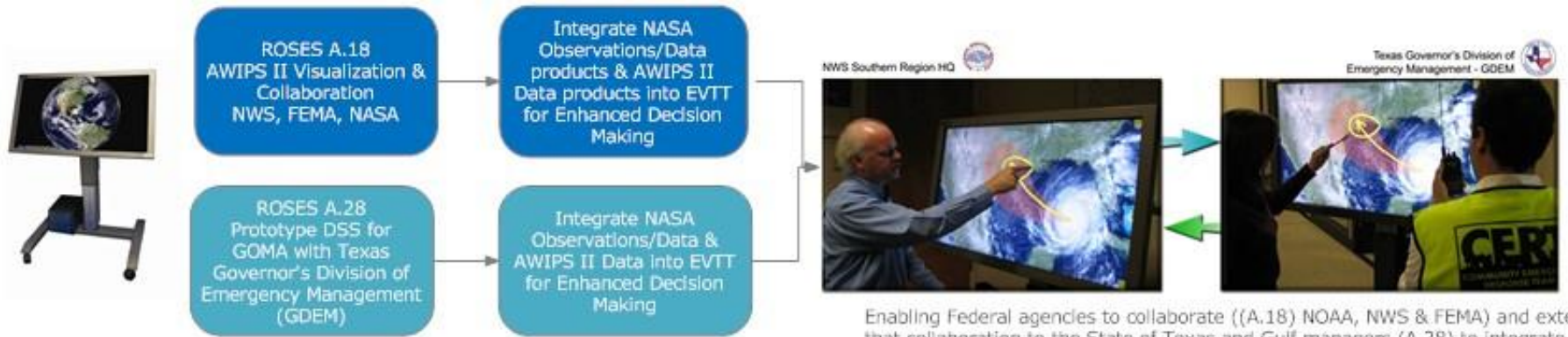
Specific EDEX/CAVE plug-ins provide control of meta data in EDEX and displayed in CAVE

Examples show NESDIS HMS hot spot and smoke shape file data with high resolution MODIS imagery



Inter-office / Inter-agency Collaboration

Use of SPoRT Data in EVTT / EVCM

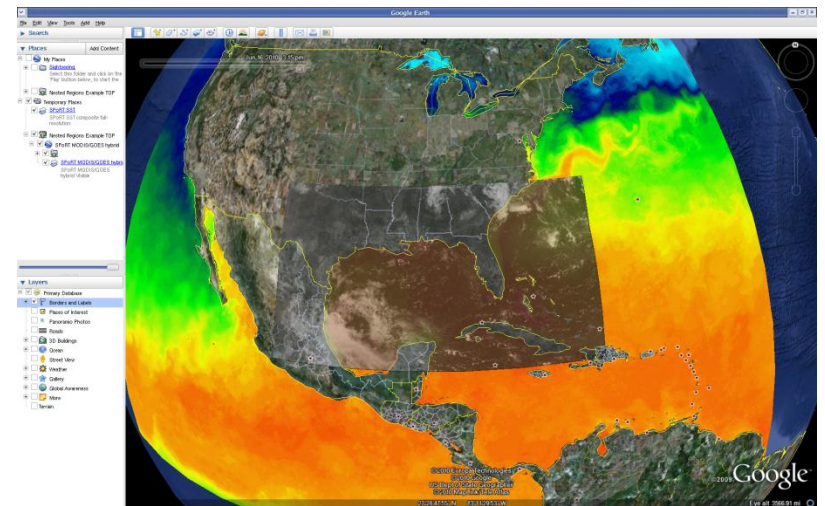


Enabling Federal agencies to collaborate ((A.18) NOAA, NWS & FEMA) and extend that collaboration to the State of Texas and Gulf managers (A.28) to integrate critical storm surge, localized sea level rise and subsidence information from NASA as a pilot DSS for the rest of the GOMA

Partner with Dave Jones of Storm Center Communications in NASA / ROSES activity to integrate SPoRT data and products into the into the EnviroVision Touch Table (EVTT) collaboration environment and EnVirocast Collaboration Module (EVCM)

- natural disaster preparedness and warning
- Gulf of Mexico Alliance (GOMA) partners and Texas Governors Division of Environmental Management
- FEMA / NWS SR

New collaboration with Alaska to bring EVCM capability and SPoRT data to the region



Wrappers for GoogleEarth displays of NASA data

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